

Amendments to the Specification:

The Amendments to the Specification are being made to correct typographical errors and are not being made for reasons of patentability.

On page 5, line 9, change "to" to "for".

On page 5, line 10, change "the" to "that".

On page 12, line 17, delete "a" from the phrase "the a decrease".

On page 14, line 20, change "his" to "this".

On page 22, line 20, change "digital video" to "digital audio".

On page 34, line 6, change ".." to ".".

Amendments Regarding The Drawings

The Examiner required Applicant to submit drawings in accordance with 37 CFR 1.81, and the drawings were filed separately on June 7, 2004. Applicant now proposes to amend the specification to add a description of the drawings as follows, and Applicant submits that no new matter is introduced by this amendment:

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagram of a data object that has file format information where a decrease in file size corresponds to a decrease in signal quality according to an embodiment of the present invention.

FIG. 2 is a diagram of a data object with file format information at a full quality signal level according to an embodiment of the present invention.

FIG. 3 is a diagram of a data object that has been embedded with independent data according to an embodiment of the present invention.

FIG. 4 is a diagram of a data object at a quality signal level that is less than that depicted in Figure 2. The data object in Figure 4 has a file size corresponding to fewer accessible embedded independent data according to an embodiment of the present invention.

FIG. 5 is a block flow diagram for embedding and scrambling a data object according to an embodiment of the present invention.

Referring now in detail to the drawings wherein like parts are designated by reference throughout, there is illustrated in FIG. 1 a diagram of a data object that has file format information where a decrease in file size corresponds to a decrease in signal quality. For example, a DVD Audio signal has a larger file size than an MP3 recording and corresponding higher quality than the smaller sized file. This is applicable for any media file, including images, audio, video, and works that are multimedia in nature. The largest set of data in FIG. 1 corresponds to "A", the next largest to "B", and the smallest, for purposes of illustration, "C". Each of these sets represent predetermined signal quality levels. Each signal manipulation step may be governed by a predetermined key, partial key, session key, authorization key, public key pair, or the like, depending on the intended application. Keys may be used singularly or collectively.

In certain embodiments, as described herein, a user receives the entire data object but is only able to observe the object as limited by the quality and file size that might correspond to "C". For instance, an MP3 level of quality, though the ability to increase the signal quality to "A", perhaps corresponding to DVD-Audio quality, can be handled in real or near real-time. As discussed in the sample embodiments, streaming of media over networks, such as the Internet, or downloads of content can be supported.

FIG. 2 corresponds to the manner in which the data object is distributed, without reference to the predetermined signal quality levels in FIG. 2. It may also refer to a separate and distinct data object that is linked to another data object. The logical

associations between at least two objects may assist with determining the quality of either of the objects or both. The objects may represent trade-offs between signal quality or quantity, as well as payment, or even methods for advertising as discussed in the sample embodiments.

FIG. 3 represents a data object at full quality that has been embedded with independent data. Because quality is a threshold for data embedding, different steganographic techniques may yield different quantity or quality of embedded independent data. As well, the type of media may have differences and such parameters as channel capacity for the media, the timing of processing or overhead, as well as overhead for handling the scrambling and de-scrambling can be flexibly supported. As the data object is scrambled, the embedded data is obscured. This does not mean embedded data will be erased, but fewer embedded data will be easily recoverable. This corresponds to FIG. 4, which is not shown to scale. It has been shown that robust open watermarks may be good candidates for resisting a wide range of signal manipulations, intended or unintended, and may serve as an appropriate baseline for of how much embedded data may be successfully embedded or detected. The inverse relationship between signal quality and the decrease in the number of detectable embedded data elements can be used to adjust quality levels of the data object or objects.

FIG. 5 is a block flow diagram of a method of preparing data objects for distribution according to an embodiment of the present invention. First, a data object is obtained. Next, independent data is embedded into the data object. Third, the now embedded data object is degraded to a predetermined signal quality level. The process may be repeated to create more tiers of predetermined quality thresholds. The data object is then ready for distribution.